Amendments to the Claims:

The following listing of the claims replaces and supersedes all previous listings.

1. (Currently Amended) Method for producing a grating image, which at least has one grating field with visually recognizable, optically variable properties, in which grating elements are disposed, that are produced by means of a writing apparatus, the method comprising the following steps:

a) determining at least one grating element, which completely lies within one working field;

b) defining a sequence of working fields, in which the grating elements are to be produced continuously without interruption along their entire length by means of the writing apparatus;

c) moving to the working fields by relative movement of a carrier, on which is located a substrate to be inscribed, and the writing apparatus;

d) writing the at least one grating element into the substrate with the writing apparatus within the respective working fields.

2. (Original) Method according to claim 1, characterized in that the determination of the grating elements in step a) is effected with the help of a data record, which contains information about form and position of the grating elements forming the grating field.

3. (Previously Presented) Method according to claim 1, characterized in that the data record contains the coordinates of the starting points and end points of the grating element.

4. (Original) Method according to claim 3, characterized in that the data record contains the coordinates of several intermediate points.

5. (Previously Presented) Method according to claim 1, characterized in that the data record contains the coordinates of Bezier curves, which describe the form of the grating elements.

6. (Previously Presented) Method according to claim 1, characterized in that with the help of the coordinates it is determined, which grating elements can be continuously produced in one writing operation.

7. (Previously Presented) Method according to claim 1, characterized in that a coordinate window of the size of the working field is defined, and in step b) is put over the coordinates of the grating element.

8. (Original) Method according to claim 7, characterized in that starting out from a defined starting point it is determined, which grating elements succeeding each other completely lie in the area of this coordinate window.

9. (Previously Presented) Method according to claim 7, characterized in that the coordinates of the grating elements within a coordinate window are sorted in such a way, that polygonal curves are the result.

10. (Previously Presented) Method according to claim 7, characterized in that all working fields are determined with the help of the coordinate window.

11. (Previously Presented) Method according to claim 1, characterized in that as a writing apparatus a light beam or a particle beam is used.

12. (Previously Presented) Method according to claim 1, characterized in that as a writing apparatus an electron beam is used.

13. (Previously Presented) Method according to claim 1, characterized in that the writing in of the grating elements in step d) is effected by deflection, of the writing apparatus.

14. (Previously Presented) Method according to claim 1, characterized in that the size of the working fields corresponds to the size of the deflection area of the writing apparatus.

15. (Previously Presented) Method according to claim 1, characterized in that when writing in the grating elements in step d) the writing apparatus is mounted stationary and the carrier is moved.

16. (Previously Presented) Method according to claim 1, characterized in that as a carrier a movably mounted table is used.

17. (Previously Presented) Method according to claim 1, characterized in that the working fields in step c) are moved to by moving the carrier.

18. (Previously Presented) Method according to claim 1, characterized in that the grating field has the form of a line.

19. (Previously Presented) Method according to claim 1, characterized in that as grating elements grating lines are used.

20. (Previously Presented) Method according to claim 1, characterized in that the grating lines at least in certain areas extend across the width of the grating field.

21. (Previously Presented) Method according to claim 1, characterized in that the grating lines are formed straight or curved.

22. (Previously Presented) Method according to claim 1, characterized in that in at least one working field only one grating element is produced.

23. (Original) Method according to claim 22, characterized in that in each working field only one grating element is produced and the individual positions of the grating elements along a motion path are moved to by a stepwise or continuous movement of the carrier.

24. (Previously Presented) Method according to claim 1, characterized in that all grating elements have the same form.

25. (Previously Presented) Method according to claim 1, characterized in that the grating elements have different forms.

26. (Previously Presented) Method according to claim 1, characterized in that the grating image has large grating elements, the coordinates of which at least partly lie outside the working field, and that these grating elements are produced according to a different method.

27. (Original) Method according to claim 26, characterized in that these large grating elements are produced continuously by shifting the carrier.

28. (Original) Method according to claim 26, characterized in that these large grating elements are divided into processing areas, the size of which corresponds to maximally one working field.

29. (Original) Method according to claim 28, characterized in that the processing areas are moved to successively by shifting the carrier and the parts of the large grating elements lying in the respective processing area are produced.

30. (Previously Presented) Method according to claim 1, characterized in that when defining the sequence of the working fields also the processing areas are taken into account.

31. (Previously Presented) Method according to claim 1, characterized in that the large grating elements are long grating lines, the coordinates of which lie outside the deflection area of the writing apparatus.

32. (Previously Presented) Method according to claim 1, characterized in that the writing paths of the writing apparatus within the respective working fields or processing areas have a meandering or zigzag shape.

33. (Previously Presented) Method according to claim 1, characterized in that in a data processing system at first all coordinates necessary for the production of the grating elements are determined, and then the writing apparatus with the help of these coordinates produces the grating elements in the substrate.

34. (Previously Presented) Method according to claim 1, characterized in that as a substrate a radiation-sensitive material is used, in which the writing apparatus causes a change of state.

35. (Original) Method according to claim 34, characterized in that as a radiation-sensitive material a photoresist layer is used.

36. (Previously Presented) Method according to claim 1, characterized in that onto the substrate provided with the grating elements a metallization is applied, and a metallic molding is galvanically produced therefrom.

37. (Original) Method according to claim 36, characterized in that the molding is used as an embossing tool for embossing a grating image into a layer.

38. (Previously Presented) Method according to claim 1, characterized in that the grating image has several grating fields.

39. (Currently Amended) Method for defining the coordinates of movement of a writing apparatus and a carrier for producing a grating image, which has at least one grating field recognizable with the naked eye, in which continuous grating elements are disposed, the method comprising the following steps:

- determining the grating elements, the coordinates of which lie within a predetermined coordinate window;

- defining a sequence of working fields, in which the writing apparatus is moved relative to a carrier, on which is located a substrate to be inscribed.

40. (Original) Method according to claim 39, characterized in that for determining the coordinates of the grating elements a contour line of the grating field is defined and the contour line is filled with the grating elements.

41. (Original) Method according to claim 40, characterized in that the grating elements are grating lines and as grating coordinates the intersection points the grating lines have with the contour line of the grating field are used.

42. (Previously Presented) Method according to claim 39, characterized in that the method is carried out with the help of a data processing system.

43. (Currently Amended) Apparatus for defining the coordinates of movement of a writing apparatus and a carrier for producing a grating image, which has at least one grating field recognizable with the naked eye, in which grating elements are disposed, the apparatus having the following devices:

- a device for determining at least one grating element, which completely lies within one working field;

- a device for defining a sequence of working fields, in which the grating elements are to be produced continuously without interruption along their entire length by means of the writing apparatus;

- a device for defining the motion path of at least one of the writing apparatus or the carrier, on which is disposed a substrate to be inscribed, so that the working fields are successively moved to and the grating elements lying in the respective working field can be produced.

44. (Original) Apparatus according to claim 43, characterized in that the apparatus has a device for determining the coordinates of the grating elements.

45. (Previously Presented) Apparatus according to claim 43, characterized in that the apparatus is a data processing system.

46. (Original) Grating image, which has at least one grating field recognizable with the naked eye, in which grating elements are disposed, a greater part of the grating elements having a length of less than 0.2 millimeter, preferably 0.05 millimeter, and being continuous.

47. (Original) Grating image according to claim 46, characterized in that the grating elements are grating lines.

48. (Previously Presented) Grating image according to claim 46, characterized in that the grating field also has long grating lines with a length of more than 0.02 millimeter.

49. (Original) Grating image according to claim 48, characterized in that the long grating lines are composed of several partial sections.

50. (Previously Presented) Grating image according to claim 46, characterized in that the grating image has several grating fields.

51. (Previously Presented) Apparatus for carrying out the method according to claim 1.

52. (Previously Presented) Grating image produced according to claim 1.

53. (Previously Presented) Security element with at least one grating image produced according to claim 1.

54. (Previously Presented) Security element with at least one grating image according to claim 46.

55. (Previously Presented) Security element according to claim 53, characterized in that the security element is a security thread, a label or a transfer element.

56. (Previously Presented) Security paper with at least one grating image produced according to claim 1.

57. (Previously Presented) Security paper with at least one grating image according to claim 46.

58. (Previously Presented) Security paper with a security element according to claim 53.

59. (Previously Presented) Security document with at least one grating image produced according to claim 1.

60. (Previously Presented) Security document with at least one grating image according to claim 46.

61. (Previously Presented) Security document with a security element according to claim 53.

62. (Previously Presented) Security document with a security paper according to claim 56.

63. (Previously Presented) Transfer material, with at least one grating image, produced according to claim 1.

64. (Previously Presented) Transfer material, with at least one grating image according to claim 46.

65. (Previously Presented) Embossing tool with at least one grating image, produced according to claim 1.

66. (Previously Presented) Embossing tool with at least one grating image according to claim 46.

67. (Previously Presented) The method of claim 13 wherein said deflection is by electromagnetic deflection.

68. (Previously Presented) The transfer material of claim 63, comprising hot stamping foil.

69. (Previously Presented) The transfer material of claim 64, comprising hot stamping foil.